

Central Intelligence Agency



Washington, D.C. 20505

DIRECTORATE OF INTELLIGENCE

31 October 1983

MEMORANDUM FOR: Mr. Paul Balabanis
Director, Planning and Economic Analysis Staff
Department of State

FROM : [REDACTED]
Office of European Analysis

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SUBJECT : Further Simulation Results on Higher Oil Prices

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1. After our discussion with you on Thursday, October 27, 1983, we made some revisions in the way the model reacts to an oil price shock; in particular we changed the Italian financial sector and in the income-expenditure relations in the smaller developed country block. We also satisfied ourselves that some results that looked questionable, such as the large swing in the US current account balance, are, in fact, reasonable.

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2. The overall results after the changes are similar to those reported in our memorandum of October 25, 1983. The price of oil rises from \$29 in 1983 (and 1984) to \$96 in 1984 due to a hypothetical net supply shortfall of roughly nine million barrels a day. This price increase causes the aggregate OECD real growth rate in 1984 to drop from a baseline estimate of 3.3 percent to -0.6 percent. The average rate of inflation in the OECD rises over 10 percentage points, and the aggregate current account balance worsens by \$133 billion (see the attached tables).

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3. The differences in individual country results stem from many factors. They depend on factors represented in the energy sector of the model, such as a country's dependence on oil, the amount of oil imported, the speed of pass-through of the price of

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imported oil to domestic energy prices, and the ease of substitution between oil and other fuels. Differing responses also depend on factors embedded in the macroeconomic sector of the model: factors such as the link between overall consumer prices and the price of energy, the response of wages to price increases, and the response of consumption to decreases in income. The results are also dependent on our assumptions about government fiscal policy. In this simulation we assumed that governments maintain the same level of consumption and investment expenditure in real terms. If we had assumed an increase in real expenditure, the estimated drop in real GNP would have been less, but the inflationary impact would have been higher and the current account deficits would have been greater.

4. The major changes we made in this scenario are:

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- 1) OPEC imports are constrained so that all additional oil export revenues are consumed within three years.
 - 2) US state and local government consumption and Japanese government investment are treated as exogenous in real terms. These changes result in government spending being treated the same in all OECD countries. We did not allow UK or Canadian government expenditure to rise in real terms although that might be a realistic policy response given the rise in oil-tax revenues in those countries.
 - 3) Exchange rates were held constant.
 - 4) The financial sector of the Italian model was adjusted so that the previously estimated wide swings in real interest rates were dampened, smoothing -- to some extent -- the impact of the oil-price shock.
 - 5) The private consumption function in the model of the smaller developed countries was adjusted. The marginal propensity to consume in the equation for the smaller developed countries was much lower than that in the other country models. This low propensity meant that in the previous simulation the smaller developed countries were able to keep up expenditure and income by a massive and unrealistic drawdown in savings. We have adjusted this equation and the results now seem more plausible, but in neither this case nor in the case of the Italian financial sector adjustments are we

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completely satisfied. We will continue to work to improve the model.

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5. Our results still show the US current account balance swinging into surplus in the second year of the price-shock. This result stems partly from a rise in nominal exports (mainly to OPEC) and a drop in imports due to the fall in US GNP; but the main factor is the sharp drop in the volume of oil imports and the concomitant fall in the oil import bill by the second year of the shock.

6. If we can be of further assistance please call me at

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